

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014991**Date Inspected:** 16-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girders (OBG)**Summary of Items Observed:**

Quality Assurance inspector (QA) Michael Foerder was at the American Bridge/Flour (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. OBG Field Splice 3E/4E Face D (Outside) FCAW
2. OBG Field Splice 5E/6E Face B (Outside) FCAW
3. OBG Field Splice 3W/4W Face E Backgouge
4. OBG Field Splice 4W/5W Face A UT Review and Repairs

**Field Splice 3E/4E Face D (Outside) FCAW**

The QA inspector periodically observed the in process Flux Cored Arc Welding (FCAW-G) being performed in the 4G overhead position by ABF welding personnel Mitch Sittinger for the North ½ of face D. QC inspector Jim Cunningham was noted to be present in order to monitor the progress and ensure the welding parameters were within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D1.5-3040B-4. The preheat and interpass temperature was verified by the QC and QA inspector to be greater than 65° Celsius (C) and the parameters were verified to be 233 amps, 23.4 volts and a measured travel speed of 153mm/min. It was noted the welding of this second side commenced on this date during the morning shift. The welder continued to place additional weld passes at this location throughout the QA inspectors shift and was observed performing proper interpass cleaning utilizing a combination of power tools and a slag hammer. The work was not completed on this date and appeared to be progressing in general conformance with the contract documents.

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### Field Splice 5E/6E Face B (Outside)

The QA inspector periodically observed ABF welding personnel Xiao Jin Wan performing flux cored arc welding (FCAW) at this location. Prior to initiating the welding at this location, the QC and QA inspector performed a visual review of the fit-up of this location in which the weld joint appeared to be in general conformance with the contract documents. This information was relayed to the welder and in turn proceeded to place the pre heat equipment and later in the shift began the FCAW. QC inspector Jessie Cayabyab was noted to be present in order to monitor the progress and ensure the welding was within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D1.5-3040A-3. The preheat and interpass temperature was verified by the QC and QA inspector to be greater than 93° Celsius (C) and the parameters were verified to be 220 amps, 23.1 volts and a measured travel speed of 160mm/min. After the root pass was completed the QC inspector performed a visual review and marked several areas for minor blending and grinding and the welder proceeded with the addition of the subsequent weld layers. The work continued throughout the balance of the QA inspector shift, was not completed and appeared to be progressing in general conformance with the contract documents.

### Field Splice 3W/4W Face E (Outside) Backgouge

The QA inspector noted and periodically observed ABF welding operators Rory Hogan and Jeremy Dolan performing the backgouging and grinding operations for face E on the second side (Outside). The welding operators continued adjusting the equipment and periodically performing the operation throughout the shift. The work was not completed on this date or turned over to QC for verification at this time but appeared to be progressing in general conformance with the contract documents.

### Field Splice 4W/5W Face A (Outside) UT Review

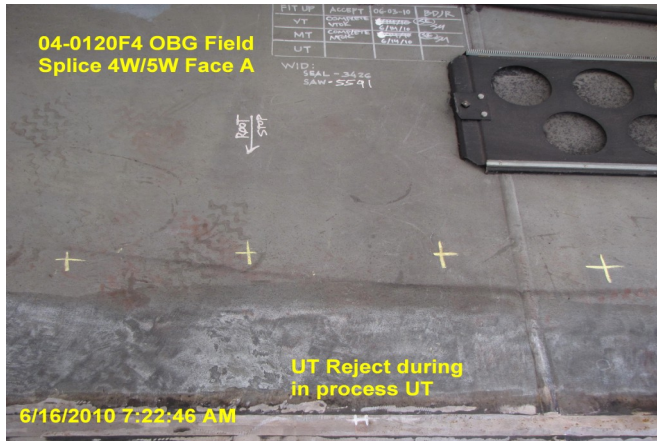
The QA inspector periodically observed QC inspector Steve McConnell performing ultrasonic testing (UT) on this date for weld designated A2. The QC inspector was noted to be utilizing a zero degree transducer for lamination examination and a 70 degree transducer and wedge combination for shear wave examination. The QC inspector marked an area approximately 20mm in length at Y location designated 8900mm due to discovering a class “A” rejectable indication. During this time ABF welding personnel Fred Kaddu was noted to be performing excavations at A1 for 3 repairs previously identified during UT examination. The welder was observed excavating and shaping the areas in order to prepare for repair welding utilizing the shielded metal arc welding (SMAW) process. QC inspector Steve McConnell was noted to be verifying the progress and adherence to the welding procedure specification. No welding at this location was performed during the QA inspector’s shift and the work appeared to be in general conformance with the contract documents. See digital photo included in the body of this report for general information.

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## Summary of Conversations:

No significant conversations held on this date for this contract.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916)813-3677, who represents the Office of Structural Materials for your project.

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**Inspected By:** Foerder, Mike

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer